

**USE OF ISOGENIC HUMAN CANCER CELLS FOR HIGH-THROUGHPUT
SCREENING AND DRUG DISCOVERY**

Abstract of the Disclosure

A strategy for drug-screening is based on cells that are isogenic except for a gene of interest. Each cell can be transfected with a vector that encodes a different fluorescent protein that can be differentially detected to monitor cell growth. Co-culture of both cells allows facile screening for compounds with selective toxicity towards a gene of interest. The drug screening is broadly applicable for mining therapeutic agents targeted to specific genetic alterations responsible for cancer development.